

A man with short dark hair and glasses is riding a bicycle. He is wearing a light blue button-down shirt and a tan backpack. He is looking upwards and to the right with a thoughtful expression, holding a black smartphone in his right hand. He has white earbuds in his ears and a gold watch on his left wrist. The background is a blurred outdoor setting with green trees and a building.

TMT's dual role
in building a
sustainable future

The EY logo consists of the letters 'EY' in a bold, white, sans-serif font. Above the 'Y' is a yellow chevron shape pointing to the right.

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The TMT sector has a dual role to play in sustainability — to transform their own organisation and ecosystems, and to use their role as digital enablers to drive the sustainability journeys across sectors.

Praveen Shankar

EY UK&I Technology, Media and Telecommunications Leader

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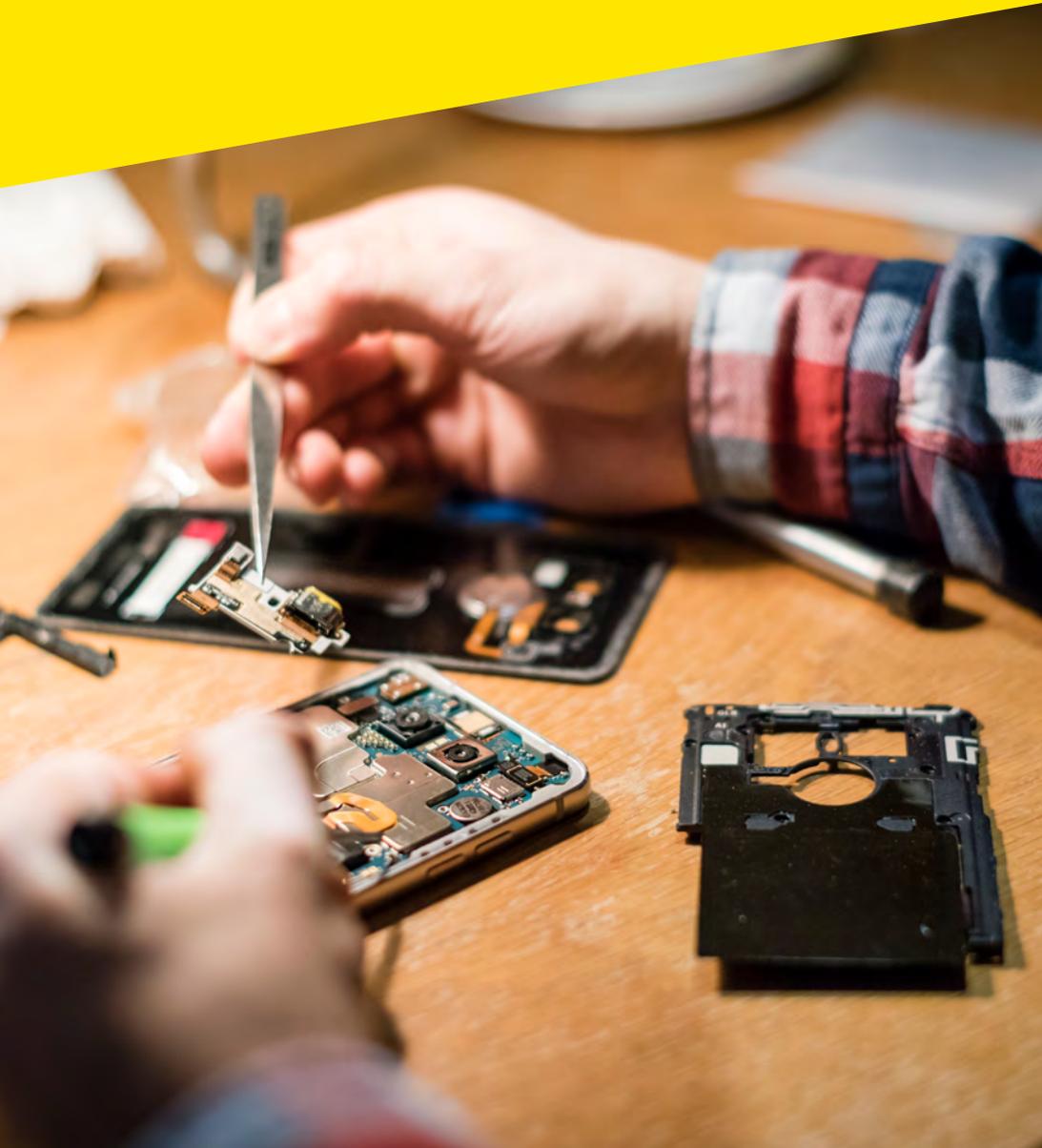
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How TMT companies must move from ambition to execution

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1 Sustainability: the unique opportunity in TMT



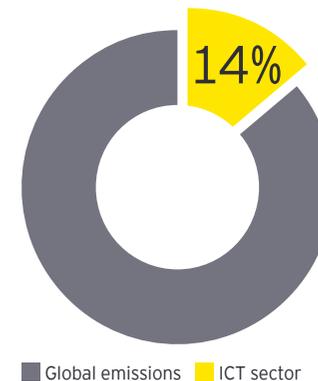
TMT companies are highly exposed to the sustainability challenge

As the world looks to take more urgent action to address the climate crisis and other social and environmental challenges, TMT companies are in the spotlight. They are significant contributors to global energy usage, emissions and e-waste. The information and communications technology (ICT) sector accounts for 2%-4% of global carbon emissions and up to 7% of global electricity use, with many projections signalling continued exponential increase in data traffic and potential for ICT to rise to 14% of global emissions by 2040.¹ Meanwhile, the global volume of e-waste is rising relentlessly, with only 17% recycled.

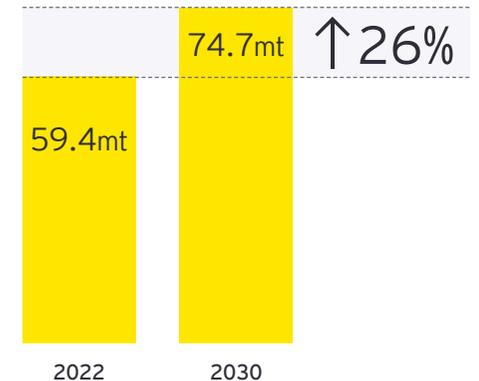
This year, for the first time, poor management of the sustainability agenda appears in the EY *Top 10 risks in telecommunications* report, ranking fifth, reflecting its growing prominence.²

Figure 1: Forecasted sustainability impact

Predicted emissions by 2040



Global e-waste forecast³
Million metric tons (mt)



Stakeholders are more demanding than ever

Consumers are increasingly vocal about the need for companies to act and more questioning of the measures companies take. Sustainability considerations drive both talent retention and attraction. Open letters from TMT employees to CEOs underline growing ESG consciousness inside organisations. Eighty-seven percent of graduates believe that it is important to make a positive environmental and social contribution during their careers, and only 12% see information technology (IT) and software engineering as careers that enable this.⁴ The investor imperative is also clear: 43% view climate change and sustainability as increasingly important to investment strategies.⁵ For regulators and policymakers, better environmental outcomes are also critical, with tighter legislation and stronger, more complex compliance requirements.

Figure 2: Consumer perspectives on corporate sustainability⁶

% of consumers who agree



Companies should act to improve sustainability now



Companies should do more to ensure their suppliers follow sustainability practices



Sceptical about whether sustainability and ethical sourcing claims made by companies are true

More can be done to maximise TMT as a force for social good

Despite tangible signs of progress, TMT companies should do more to take full advantage of the opportunities afforded by sustainability. For example, unless the mobile industry acts faster, it will only achieve 70% of its full potential impact on the UN Sustainable Development Goals (SDGs) by 2030. Looking beyond the latest net-zero targets communicated by companies or the growing prominence of environmental and social pledges within TMT, more pervasive and concerted action is required if companies are to become more sustainable themselves and unlock greater sustainability for others.





TMT has a dual role to play – reducing their emissions and also acting as a catalyst for other sectors

For TMT companies, the sustainability opportunity is two-fold.

On the one hand, they are high energy users and consequently heavy carbon emitters. Data centres are energy-intensive, using an estimated 200 terawatt-hours (TWh) each year, more than the national energy consumption of Iran.⁷ The power requirements for emerging technologies are high and growing. 5G technology is estimated to add between 2.7 and 6.7 million tonnes of CO2 equivalents per year by 2030.⁸ Bitcoin produces 36.9 megatons of CO2 produced annually, comparable with New Zealand.⁹ Training artificial intelligence (AI) models to do natural language processing (NLP) can produce the carbon dioxide equivalent of five times the lifetime emissions of an average American car, or equivalent to 300 round-trip flights between San Francisco and New York.¹⁰

On the other hand, TMT companies have a key role in the design and execution of sustainability. TMT-enabled smart technologies help quantify, monitor and predict energy usage whilst also driving exponentially greater efficiency. In the future, ICT solutions could reduce global emissions by up to 15%, according to the International Telecommunications Union (ITU).¹¹ Today's mobile technologies are enabling carbon reduction equivalent to 4% of global emissions, which is 10 times the mobile industry's own carbon footprint.¹²

Figure 3: Mobile technology: enabled avoided carbon emissions by category¹³



TMT companies enjoy deep and wide-ranging reach into enterprises across all industries, and they have unparalleled touchpoints with billions of consumers. These relationships put them in a unique position to deliver smart solutions for a more efficient, sustainable future.

ESG-centric organisations can unlock greater financial value

Delivery on the sustainability agenda is challenging but, if successful, it creates additional long-term value. Becoming an ESG-centric organisation leads to both improved financial performance and better stakeholder perceptions. There is a substantial prize on offer if the TMT industry can take the right steps on sustainability.

Figure 4: Long-term value creation for ESG-centric organisations

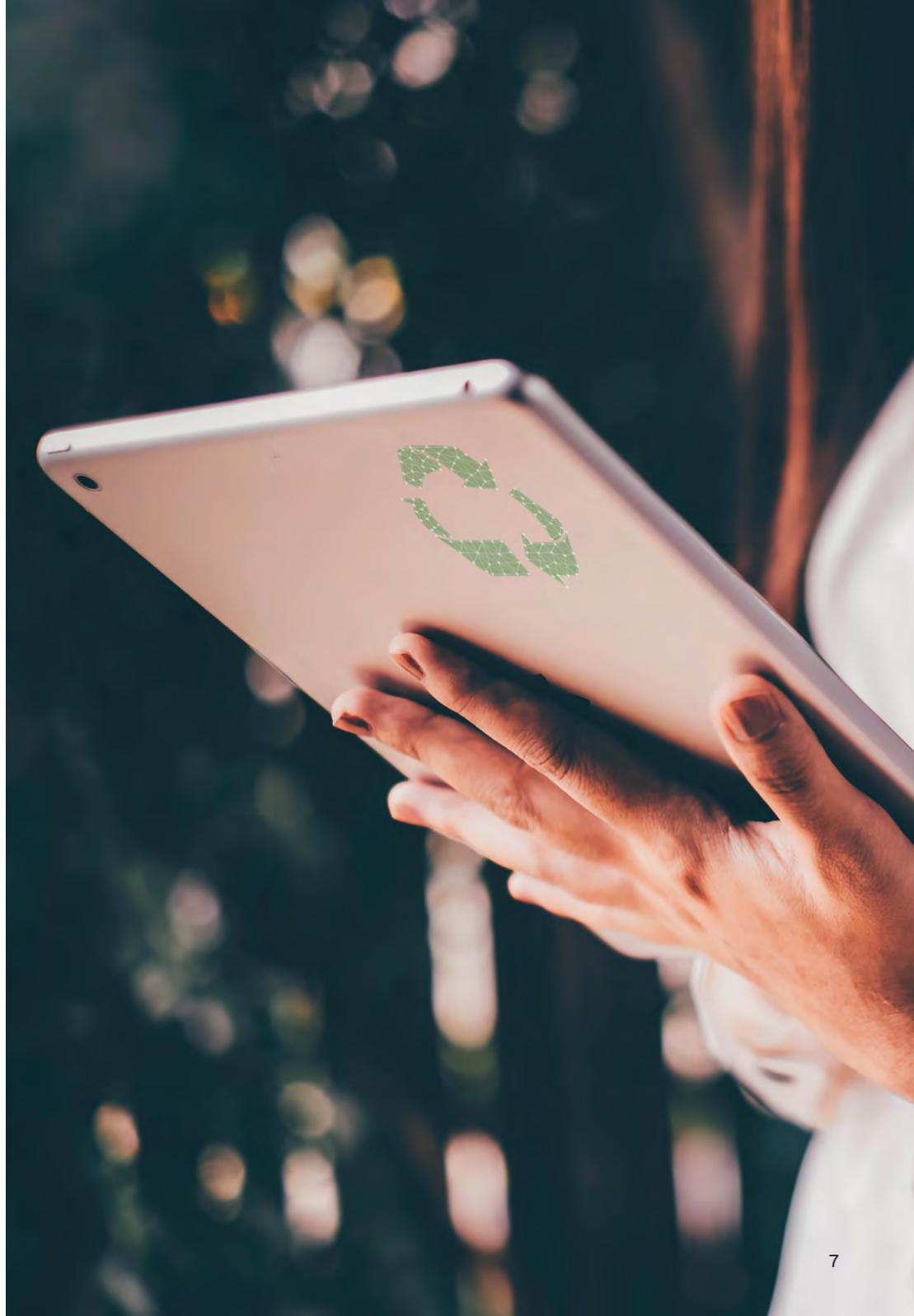


Sustainability is not yet a core business principle for most TMT companies

For companies to realise the financial upside of sustainability, a change in mindset is required. Currently, only 3% of TMT CEOs cite it as a leading trend impacting their company, well below the energy and resources sector (70%) and consumer products organisations (20%).¹⁴ Whilst many TMT companies have chief sustainability officers (CSOs) in place, leadership cohesion may also require attention. One recent study found that only 21% of the Fortune 500 CSOs reported directly to the CEO, down from 35% 10 years previously.¹⁵ The positive is that 57% of European IT companies agree that sustainability plays a role in their digital technology choices. This one stat alone cannot mask the low prioritisation allied with limited visibility at the leadership level. There is a risk that sustainability remains a 'bolt-on' at both the business unit and product level in the future, and meaningful action may not occur.

Figure 5: TMT CEOs' views of leading trends impacting their business

Which of the following trends are having the greatest impact on your organisation?



2 How TMT companies can change the game in sustainability



Positive momentum across TMT with significant potential upsides

Although sustainability is not yet a core business principle, the TMT industry is committing to science-based targets alongside timeframes to reach carbon-neutral and net-zero targets. Most leading mobile operators already disclose their climate impacts via the Carbon Disclosure Project, whilst service providers representing 31% of the global connections have net-zero targets in place.¹⁶ Elsewhere, a coalition of 25 European data centre operators and 17 industry associations has signed an agreement to become climate neutral by 2030 as part of the Climate Neutral Data Centre pact.¹⁷ Media companies are also taking positive steps – including using carbon calculators sensitised to the production world, to collaborating among publishers and broadcasters to educate readers and audiences about climate action, and also fighting against fake news.¹⁸

Major data centre operators are increasing their use of efficient 'hyperscale' data centres. Companies are actively building cyclicity into the foundation of the asset life cycle through increasing product repair and refurbishment.

The way forward: a holistic approach across four critical domains

The dual role of TMT is to address its own sustainability priorities and also to enable the sustainability transformation of its customers.

Addressing your own sustainability priorities

1. Organisation

To build credibility, TMT companies need to begin by addressing their own sustainability opportunities. They should look at their internal organisation, including its culture, operating model, leadership and, above all, use of technology. They must ensure sustainability is part of the fabric of how they operate.

2. Industry ecosystem

Adjacent to their own organisation are those companies that TMT directly interacts with. The influence of TMT over this ecosystem is profound, and they need to leverage that to promote sustainable behaviours. For example, they should favour ecosystem partners that have set and are delivering on their own sustainability commitments, such as the design of circularity into their offerings.

3. Business customers

As an enabler of enterprises, it is incumbent on TMT companies to use their reach and engagement to influence wider sustainability outcomes. They can deploy solutions that permeate across companies in all other industries but that have sustainability baked into their design.

4. End consumers

The unique relationships TMT companies have with end consumers allow them to define the sustainability narrative and shape behaviours. This is achievable not only through the product and service offering but also through the messaging promoted by media companies, the application of end-user technology and education around e-waste.

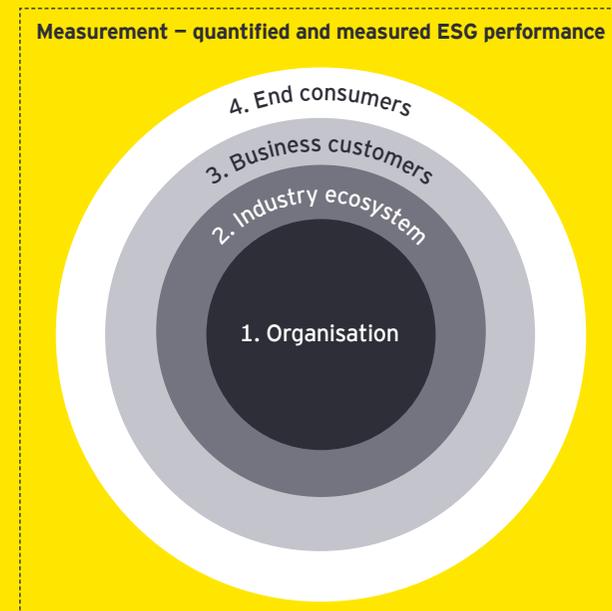
Figure 6: The four critical domains to address sustainability for TMT

1. Organisation

- ▶ **Purpose** – sustainability at the heart of your own organisation's purpose, and part of the employee proposition
- ▶ **Disclosures** – high-quality, up-to-date climate change disclosures
- ▶ **Energy-efficient operations** – including IT, networks, emerging technologies, supply chain
- ▶ **Renewable energy supply** – through power purchase agreements

2. Industry ecosystem

- ▶ **Cyclicality** – built into the asset life cycle
- ▶ **Visibility of tier 2 and tier 3 performance** – of the end-to-end supply chain, its security and sustainability impact
- ▶ **Alignment and training of ecosystem partners** – shared responsibility and reducing Scope 3 emissions
- ▶ **Sustainable vendor selection and alliances** – driving collaboration, enabling and holding suppliers to account



3. Business customers

- ▶ **Sustainability core to product and service propositions** – as a horizontal across the portfolio, including automated system optimisation and early warning systems
- ▶ **Customers supported through use cases** delivering positive ESG outcomes
- ▶ **Enable climate monitoring** through sensors, platforms, connectivity, analytics, AI, 5G, IoT and drones
- ▶ **Enable digital inclusion** by working alongside B2B customers

4. End consumers

- ▶ **Consumer awareness** of your social contract and ESG actions being taken
- ▶ **Consumers' transition to more sustainable practices enabled** through tools and digital technologies, e.g., self-service and sustainable customer operations
- ▶ **Cost-efficient** – enabling re-use, self-repair and self-upgrade of products
- ▶ **Reduced digital anxiety** for consumers with improved support, education and awareness, e.g., data privacy

3 How TMT companies must move from ambition to execution



Moving from ambition to execution

Reframe your strategy

1 Refine your strategy with an actionable roadmap

Define a long-term sustainability strategy including near-term milestones. Embed TMT's dual priorities of creating a sustainable organisation as well as enabling change in other sectors. Set guidelines for the trade-offs between sustainability and business outcomes, e.g., energy consumption vs. the performance of AI.

2 Adopt a robust set of KPIS to measure ESG performance

Go beyond compliance to measure the performance of your strategy. Combine ESG metrics tailored to TMT with those that measure the greatest impact on the business. Include measurement of the environmental as well as human and societal impact such as digital inclusion, ethical technology and diversity, which are very relevant for TMT.

3 Embed a sustainable culture in your organisation

Educate your employees on the impact and opportunity for TMT on sustainability. Define sustainability expectations for specific roles and functions. Embed into business as usual by incentivising right behaviours.

Accelerate transformation

4 Drive holistic change through business model transformation

Reduce emissions by making your operating model more efficient. Launch transformation to embed sustainability goals into all aspects of the business. Re-imagine end to end processes, e.g., software development or technology product life cycles.

5 Digitise sustainability using AI and analytics

Leverage technology, across the ecosystem, to turbocharge your sustainability journey. Analytics and AI have huge potential to drive change in sustainability, e.g., tools to monitor and manage real-time, data centre power usage and identify data de-duplication and compression alternatives.

6 Access green finance to aid energy efficiency

Stay abreast of evolving sustainability tax policy to secure valuable incentives. Green financing mechanisms are an increasingly important catalyst of energy efficiency programmes.

7 Green your energy supply and enable suppliers' sustainability

Power purchase agreements reduce emissions and insulate from market volatility – and are best utilised where your energy requirements are most predictable, e.g., data centres and network operations.

Prioritise technology suppliers that make tangible progress on sustainable sourcing commitments. Provide end-to-end supply chain transparency to regulators, investors and customers.

8 Enable digital inclusion and reduce digital anxiety

Prioritise the social aspects of your sustainability agenda. Bridge the digital divide to drive inclusiveness. Combat fake news by investing in technology solutions.

Reduce the levels of consumer anxiety by ensuring data privacy and security. Also maximise transparency by educating and articulating their options and risks.

Operationalise sustainability

9 Ensure robust programme and performance management

Make sustainability performance a board-level agenda. Ensure alignment and strong collaboration between sustainability initiatives across the functions. Empower a core programme management function to execute strategy, measure and take corrective actions.

10 Transform your supply chain to maximise circularity

Design your supply chain for circularity from the outset. Work with tier 1 and tier 2 suppliers to gain end-to-end visibility of the supply chain and reduce scope 3 emissions – key for TMT companies with global supply chains.

11 Deploy sustainable products and services

Design and deploy products and services that help consumers and businesses to be sustainable. The depth and breadth of relationships and the omni-presence of digital technologies uniquely places TMT companies to enable change. This delivers tangible sustainable outcomes as well as revenue growth for TMT.

Build trust

12 Deliver results and reinforce credibility with regulators and wider stakeholders

Never has the TMT industry had so much external focus on its sustainability. It is imperative to build trust in your sustainability agenda by breaking down your ambitions into both long-term and near-term commitments. Deliver and demonstrate actual progress in achievement of results. Transparently report and communicate these results, success stories and your plans with regulators, investors, and wider stakeholders.

For more information on this report, please contact:



Praveen Shankar
EY UK&I Technology, Media
and Telecommunications Leader
pshankar@uk.ey.com



Greg Sumner
Senior Manager, EY UKI
TMT Consulting
gsumner@uk.ey.com



Tom Loozen
EY Global Telecommunications
Leader
tom.loozen@nl.ey.com



Martyn Whistler
EY Global Lead Analyst,
Media and Entertainment
mwhistler@uk.ey.com



Adrian Baschnonga
EY Global Lead Analyst,
Telecommunications
abaschnonga@uk.ey.com



Kimmi Dodia
EY UK&I TMT Marketing
Manager
kimmi.dodia@uk.ey.com

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